Abstr. Code: POS-CPS-063

Community pharmacists and the management of antibiotics

John Bell[1], Adrian Shephard[2], Adam Conley[2], Sabiha Essack[3]

[1]Graduate School of Health, University of Technology Sydney, Sydney, Australia;
[2]RB Healthcare International, Slough, United Kingdom;
[3]Antimicrobial Research Unit, University of KwaZulu-Natal, Durban, South Africa

1. INTRODUCTION

- **Antimicrobial resistance (AMR) is estimated to cause the death of approximately 25,000 Europeans[1] and around 99,000 Americans per annum;[2] by 2050, if unchecked, this is predicted to rise to 10 million people annually across the globe.[3]**
- **AMR exerts a significant cost on current healthcare systems: Europe spends €9 billion[4] and the US up to $20 billion[5] on excess direct healthcare costs each year.**
- **The WHO has identified AMR as a critical issue for global health, with the need for effective antimicrobial stewardship measures to be implemented worldwide. This requires the input of all stakeholders: Governments, all healthcare professionals, patients and the broader community.**
- **Community pharmacy is a key area of intervention, in particular in the management of non-antibiotic responsive conditions, for example, upper respiratory tract infections (URTIs), such as sore throat, common colds, influenza and cough. In 60–90% of URTIs, antibiotics fail to provide resolution or symptomatic relief.[6-8]**
- **Pharmacists are ideally placed to offer guidance on rational antibiotic use and recommend effective symptomatic treatments.**
- **The Global Respiratory Infection Partnership (GRIP) was created with the aim of promoting antimicrobial stewardship. Comprising doctors, pharmacists and microbiologists from 11 countries, GRIP works to facilitate multi-stakeholder commitment to appropriate antibiotic use in URTIs.**
- **A fundamental component of GRIP's work is in identifying and understanding the antibiotic-related perceptions of patients and healthcare professionals (HCPs) at the point of consultation.**

2. AIMS

- To gain a greater understanding of what drives patients to consult an HCP for an URTI, which HCP they consult, and whether an antibiotic is the end result of a consultation.
- To determine whether GRIP should focus on the role of the community pharmacist in educating patients on antimicrobial stewardship and providing alternative, effective, symptomatic relief.

3. METHOD

- In 2014, an online multi-national consumer research study was conducted across 33 countries in Europe, Asia, Africa, Australasia and North/South America to investigate consumers' self-reported recall of minor ailments in the previous year and the reported management behaviours.
- An online questionnaire ascertained the incidence of minor ailments in five categories: respiratory tract infections, pain, gastrointestinal issues, eye complaints and foot problems.
- For respiratory tract infections, the following symptoms were investigated: sore throat, nasal congestion, dry/tickly cough, chesty cough/chest congestion, sinus pain and laryngitis.
- Respondents were further asked if they had visited an HCP for information, advice or treatment, what type of HCP was consulted and why, and the outcome of the consultation in terms of recommended, prescribed or self-selected treatments.
- A total of 17,302 questionnaires were completed online (approximately 530 per country). Data are reported from Australia, Brazil, Germany, India, Indonesia, Malaysia, South Africa, United Arab Emirates, the UK and the US, representing different demographic and healthcare systems around the world.

4. RESULTS

All data refer to respondent data.

URTI incidence

- Overall, 11,261 subjects globally experienced an URTI in the previous 12 months, a total of 24,561 episodes (subjects reported suffering more than one symptom of URTI).

HCP consultations

- Of those reporting URTI symptoms (n=11,261):
  - 6,135 consulted an HCP, such as a general practitioner (GP), otorhinolaryngologist, pharmacist, pharmacy assistant, nurse, etc. for further advice, information or treatment. Subjects reported visiting multiple HCPs
  - Physicians were the most commonly contacted HCP for URTI symptoms (among physicians, GPs were the most often consulted), followed by pharmacists and pharmacy assistants. This varied widely by country; for example physician consultation rates ranged from 22% in the UK to 64% in India
  - The most common reasons patients consulted a physician for an URTI are shown in Figure 2. The majority of patients did not present with the main aim of obtaining a prescription.

Antibiotic use

- Some 1,047 physician consultations (n=5,303) were reported to have resulted in an antibiotic recommendation that was then purchased. Similar results were seen with GPs' antibiotic recommendations.
- Some 969 physician consultations (n=5,303) resulted in an antibiotic prescription that was subsequently dispensed (see Figure 3). Similar results were seen with GPs' antibiotic prescribing.

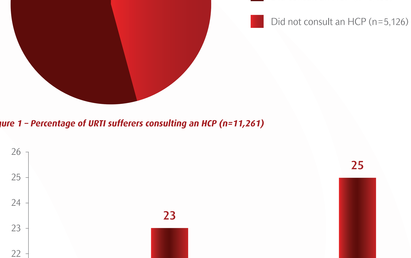

Figure 1 – Percentage of URTI sufferers consulting an HCP (n=11,261)

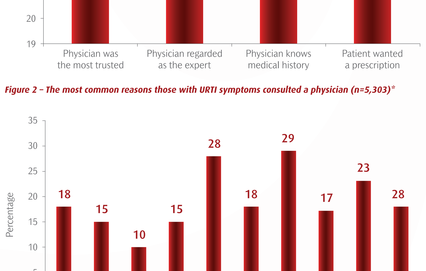

*Figure 2 – The most common reasons those with URTI symptoms consulted a physician (n=5,303)**

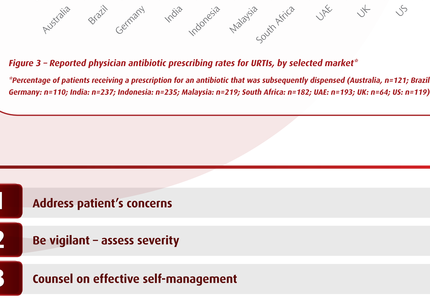

*Figure 3 – Reported physician antibiotic prescribing rates for URTIs, by selected market**

**Percentage of patients receiving a prescription for an antibiotic that was subsequently dispensed (Australia, n=121; Brazil: n=152; Germany: n=110; India: n=237; Indonesia: n=235; Malaysia: n=219; South Africa: n=102; UAE: n=193; UK: n=64; US: n=119)*

5. CONCLUSIONS

- The data presented highlight some common themes across countries, but also differences in attitudes and behaviours, when it comes to URTI management.
- HCPs remain important for providing advice for these common conditions, which are frequently treated with antibiotics. The new data highlight the need for greater patient education on URTIs and appropriate self-management.
- Existing European research shows most patients consult physicians for reassurance and symptomatic relief, rather than the desire for an antibiotic prescription.[9,10] This new research confirmed most patients seeking advice, information or treatment from their HCP, did not consult with the primary aim of obtaining a prescription.
- Among the key drivers for HCP consultation was patients' desire to talk with someone they trusted and with expert knowledge. Pharmacy is ideally placed to provide this to patients, as well as being the access point for medicines that provide effective, symptomatic relief.
- The data show that there is a significant likelihood that URTI patients who present to the physician will obtain an antibiotic, although this differs between countries. It should be noted, however, that in some countries antibiotics are sold directly from pharmacies.
- All HCPs play a pivotal role in empowering patients to manage URTIs appropriately, which underpins the GRIP's strategy that changing behaviours around antibiotic use in URTIs requires an integrated, interlinked approach across all HCPs that promotes a patient-centred symptomatic management approach, as summarised by its **5P framework** (see Figure 4). Pharmacists are ideally placed to implement such a strategy, emphasising their role in symptomatic management provision.

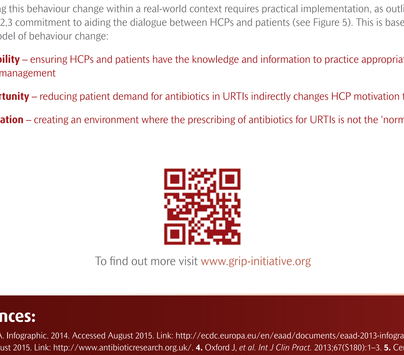

Figure 4 – Global Respiratory Infection Partnership 5P framework

- Delivering this behaviour change within a real-world context requires practical implementation, as outlined by the GRIP's 1,2,3 commitment to aiding the dialogue between HCPs and patients (see Figure 5). This is based on the COM model of behaviour change:
  - **Capability** – ensuring HCPs and patients have the knowledge and information to practice appropriate URTI management
  - **Opportunity** – reducing patient demand for antibiotics in URTIs indirectly changes HCP motivation to prescribe
  - **Motivation** – creating an environment where the prescribing of antibiotics for URTIs is not the 'norm'.

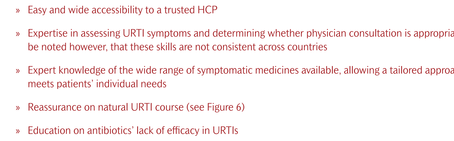

Figure 5: GRIP's 1,2,3 approach for HCPs

- Adopting such an approach can reap benefits; Italian data show use of GRIP materials within a GP consultation resulted in a reduction in antibiotic prescribing, from 44% to 29%.
- The GRIP materials' emphasis on self-management provides a clear role for pharmacy. Promoting the pharmacist as the primary HCP for URTI management, both directly to patients and indirectly via physician guidance, would enable patients to obtain the expert knowledge they seek from someone they trust:
  - Easy and wide accessibility to a trusted HCP
  - Expertise in assessing URTI symptoms and determining whether physician consultation is appropriate. It should be noted however, that these skills are not consistent across countries
  - Expert knowledge of the wide range of symptomatic medicines available, allowing a tailored approach that meets patients' individual needs
  - Reassurance on natural URTI course (see Figure 6)
  - Education on antibiotics' lack of efficacy in URTIs
  - Cost benefit for individual patients and the community.
- Measures that enhance the HCP-patient interaction and promote the role of the pharmacist as the primary point of contact for URTIs are essential globally to reduce antibiotic prescribing in URTIs.

Figure 6: Duration of URTI symptoms

To find out more visit www.grip-initiative.org

GRIP
Global Respiratory Infection Partnership

References:

1. ECDC/EMA. Infographic. 2014. Accessed August 2015. Link: http://ecdc.europa.eu/en/eaad/documents/eaad-2013-infographic-antibiotics-resistance.pdf. **2.** IDSA. Accessed August 2015. Link: http://www.idsociety.org/AR_Facts/. **3.** Antibiotic Research UK. 2014. Accessed August 2015. Link: http://www.antibioticresearch.org.uk/. **4.** Oxford J, *et al. Int J Clin Pract.* 2013;67(S180):1–3. **5.** Centers for Disease Control and prevention. 2013. Accessed August 2015. Link: http://www.cdc.gov/drugresistance/pdf/ar-threats-2013-508.pdf. **6.** Foden N., *et al. Br J Gen Pract.* 2013;63:611–613. **7.** Ah-See K., *et al. BMJ* 2007;334:358–361. **8.** CDC. Accessed August 2015. Link: http://www.cdc.gov/getsmart/community/materials-references/print-materials/hcp/adult-acute-cough-illness.pdf. **9.** Welschen I, *et al. Family Practice.* 2004; 21: 234–237. **10.** van Driel ML, *et al. Ann Fam Med* 2007;4:494-499.

Acknowledgements:

The Global Respiratory Infection Partnership was convened by RB Healthcare International. All materials were sponsored by and developed in partnership with RB Healthcare International. The views expressed in the materials are those of the Partnership.